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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,938	11/30/2001	Christopher J. Hansen	BP 1791	5769

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EXAMINER
NGUYEN, TU X

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/997,938	HANSEN ET AL.	
	Examiner	Art Unit	
	Tu X Nguyen	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-15, 17-30-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-15, 17-30-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 4, 16, 26-27, 31 and 36-37, have been cancelled.

2. Applicant's arguments with respect to claims 1-3,5-7, 13-15, 17-20, 24-25, 28-33 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 8 and 21, applicants argue whitehead fails to teach claim limitations as describes in 1st paragraph page 31. However, Whitehead discloses "the sending and receiving stations advertise not only packet but also power levels and other interference related information" (see col.3 lines 9-12) reads on "transmitting, by the targeted wireless device, the determined signal strength of the packet to transmitting wireless device" and "receiving station determines that the data packet can be sent at an adequate power level (see col.3 lines 25-26) reads on "determining, by the transmitting wireless device, adequacy of the first power level based on the determined signal strength".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8, 10-12, 21, 23 and 33-35, are rejected under 35 U.S.C. 102(b) as being anticipated by Whitehead (US Patent 5,732,077).

Regarding claims 8 and 33, Whitehead discloses a method for transmit power control of transmitting wireless device, the method comprises:

transmitting, by the transmitting wireless device, a packet to a targeted wireless device via a wireless channel at a first power level (see col.3 lines 6-17 "power levels" corresponds to "first power level");

determining, by the targeted wireless device, signal strength of the packet received via the wireless channel to produce a determined signal strength (see col.3 lines (see col.3 lines 18-21);

transmitting, by the targeted wireless device, the determined signal strength of the packet to transmitting wireless device (see col.3 lines 9-12);

determining, by the transmitting wireless device, adequacy of the first power level based on the determined signal strength (see col.3 lines 25-26).

when the first power level is not adequate, determining, by the targeted wireless device, a second power level for the transmitting wireless device based on the determination of the adequacy of the first power level (see col.3 lines 5-29, "power levels, power constraint list" corresponds to "second power level"); and

adjusting, by the transmitting wireless device, transmit power from the first power level to the second power level when the first power level is not adequate (see col.9 lines 21-22).

Regarding claim 10, Whitehead discloses the transmitting the packet further comprises:

transmitting the packet to include an indicated power level of transmission by the transmitting wireless device (see col.3 lines 5-29).

Regarding claims 11-12 and 34, Whitehead discloses transmitting, by a station as the transmitting wireless device, the packet to an access point (col.4 lines 45-50) via a wireless channel at a first power level within an 802.11 wireless network; determining, by the access point as the targeted wireless device, the signal strength of the packet, the adequacy of the first power level, and the second power level when the first power level is not adequate (see col.2 line 49 through col.3 line 29 and, "WLAN environment" operable generally pursuant to the IEEE 802.11 standard).

Regarding claim 21, Whitehead discloses everything as claim 1 above. More specifically, Whitehead discloses a wireless communication network that includes a plurality of basic service sets, wherein each of the plurality of basic service sets comprises: access point; and plurality of stations (see col.4 lines 45-60), wherein the access point includes an AP processing module and AP memory, wherein the AP memory includes operational instructions (see col.9 line 48 through col.10 line 3).

Regarding claim 23, Whitehead discloses wherein the STA memory further comprises operational instructions that cause the one of the plurality of stations to transmit the packet by: transmitting the packet to include an indicated power level of transmission to identify the first power level (see col.9 lines 48-67 and col.3 lines 5-29).

Regarding claim 35, Whitehead discloses operation instructions (see col.9 lines 48-67) that cause the STA processing module to provide and indication of power level

adjustment from the first power level to the second power level to the access point (see col.9 lines 19-34).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-2, 5-7, 13-14, 17-18, 24-25, 29 and 32, are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehead (US Patent 5,732,077) in view of Deluca et al. (US Patent 5,144,296).

Regarding claim 1, Whitehead discloses a method for transmit power control of transmitting wireless device, the method comprises:

transmitting, by the transmitting wireless device, a packet to a targeted wireless device via a wireless channel at a first power level (see col.3 lines 6-17 "power levels" corresponds to "first power level");

determining, by the targeted wireless device, whether the signal strength of the packet received via the wireless channel (see col.6 lines 49-50).

determining, by the targeted wireless device, whether the signal strength is within an acceptable range of signals strength (see col.6 lines 49-50).

when the signal strength is not within the acceptable range of signals strengths, determining, by the targeted wireless device, a second power level for the transmitting

wireless device such that the signal strength is within the acceptable range of signals strengths (see col.3 lines 6-29); and

transmitting, by the targeted wireless device, a packet indicating the second power level to the transmitting wireless device via the wireless channel (see col.3 lines 5-29).

Whitehead fails to disclose "decoding error information is within an acceptable range of error rate".

Deluca et al. disclose "decoding error information is within an acceptable range of error rate" (see col.4 lines 25-29). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Whitehead with the above teaching of Deluca et al. in order to provide decoding error due to such factors as burst noise errors, signal fading errors and errors due to low signal strength.

Regarding claims 24 and 29, Whitehead discloses everything as claim 1. More specifically, AP memory further comprises operational instructions that cause the one of the plurality of stations to transmit the packet by: transmitting the packet to include an indicated power level of transmission to identify the first power level (see col.9 lines 48-67 and col.3 lines 5-29).

Regarding claim 2, the modified Whitehead discloses the transmitting the packet further comprises:

transmitting the packet to include an indicated power level of transmission by the transmitting wireless device (see Whitehead, col.3 lines 5-29).

Regarding claim 5, Whitehead discloses providing, by the transmitting wireless device, an acknowledgement of receipt of the second power level to the targeted wireless device; and providing, by the transmitting wireless device, an indication of power level adjustment from the first power level to the second power level to the targeted wireless device (see col.9 lines 19-34).

Regarding claims 6-7, Whitehead discloses transmitting, by a station as the transmitting wireless device, the packet to an access point (col.4 lines 45-50) via a wireless channel at a first power level within an 802.11 wireless network; determining, by the access point as the targeted wireless device, the signal strength of the packet, the adequacy of the first power level, and the second power level when the first power level is not adequate (see col.2 line 49 through col.3 line 29 and, "WLAN environment" operable generally pursuant to the IEEE 802.11 standard).

Regarding claim 13, Whitehead discloses everything as claim 1 above. More specifically, Whitehead discloses a wireless communication network that includes a plurality of basic service sets, wherein each of the plurality of basic service sets comprises: access point; and plurality of stations (see col.4 lines 45-60), wherein the access point includes an AP processing module and AP memory, wherein the AP memory includes operational instructions (see col.9 line 48 through col.10 line 3).

Regarding claims 14 and 25, Whitehead discloses wherein the STA memory further comprises operational instructions that cause the one of the plurality of stations to transmit the packet by: transmitting the packet to include an indicated power level of transmission to identify the first power level (see col.9 lines 48-67 and col.3 lines 5-29).

Regarding claim 17, Whitehead discloses everything as claims 1, 6 and 13. More specifically, Whitehead discloses third and fourth power level (see col.3 lines 6-29, "power levels and power constraint list" corresponds to third and fourth power level.

Regarding claims 18 and 32, Whitehead discloses wherein the AP memory further comprises operational instructions that cause the AP processing module to transmit the packet by: transmitting the second packet to include an indicated power level of transmission to indicate the third power level (see col.9 lines 48-65).

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehead in view of Deluca et al. and further in view of Park (US Patent 6,212,364).

Regarding claim 22, Whitehead discloses everything as claim 21 above. More specifically, Whitehead discloses computing accuracy of the recaptured data (see col.4 lines 25-44 and col.6 lines 11-35). However, Whitehead fails to disclose converting the radio frequency signal into a base-band signal; demodulating the baseband signal; separating the recaptured data to isolate the indicated power level of transmission from data; generating the power level to be increased when the RSSI below corresponding minimum performance thresholds; and generating the power level to be decreased when the RSSI above acceptable performance thresholds.

Park discloses converting the radio frequency signal into a base-band signal (see col.2 lines 65-66); demodulating the baseband signal (see col.2 lines 65-66); separating the recaptured data to isolate the indicated power level of transmission from data (13, fig.1); generating the power level to be increased when the RSSI below corresponding minimum performance thresholds; and generating the power level to be decreased

when the RSSI above acceptable performance thresholds (see col.2 lines 39-59). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Whitehead with the above teaching of Park in order to provide circuitries to receive RF carrier frequencies, to demodulate frequency, to analyze reception signal quality and accordingly provide power indication to the remote stations.

9. Claims 3, 9, 15, 19-20, 27-28 and 30, are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehead in view of Deluca et al. and further in view of Park (US Patent 6,212,364).

Regarding claims 3, 9, 15, 27-28 and 30, the modified Whitehead discloses everything as claim 1 above. More specifically, Whitehead discloses computing accuracy of the recaptured data (see col.4 lines 25-44 and col.6 lines 11-35). However, Whitehead fails to disclose converting the radio frequency signal into a base-band signal; demodulating the baseband signal; separating the recaptured data to isolate the indicated power level of transmission from data; generating the power level to be increased when the RSSI below corresponding minimum performance thresholds; and generating the power level to be decreased when the RSSI above acceptable performance thresholds.

Park discloses converting the radio frequency signal into a base-band signal (see col.2 lines 65-66); demodulating the baseband signal (see col.2 lines 65-66); separating the recaptured data to isolate the indicated power level of transmission from data (13,

fig.1); generating the power level to be increased when the RSSI below corresponding minimum performance thresholds; and generating the power level to be decreased when the RSSI above acceptable performance thresholds (see col.2 lines 39-59). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Whitehead with the above teaching of Park in order to provide circuitries to receive RF carrier frequencies, to demodulate frequency, to analyze reception signal quality and accordingly provide power indication to the remote stations.

Regarding claims 19-20, Whitehead discloses everything as claim 3 and 18 above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed Tu Nguyen whose telephone number is 703-305-3427. The examiner can normally be reached on Monday through Friday from 8:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

April 1, 2005

NICK CORSARO
PRIMARY EXAMINER